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**UCC**

University College Cork, Ireland  
Coláiste na hOllscoile Corcaigh

# Information Behaviour of Humanities PhDs on an Information Literacy Course

## 1. Introduction

The purpose of this study is to use a graduate information literacy course/module as a conduit through which the information seeking needs and behaviour of first-year humanities PhD students can be examined and better understood. This can assist University College Cork (UCC) Library in continuing to adapt the course/module, and also by suggesting other potential interventions. The study can inform how libraries elsewhere can better support PhD researchers in the humanities. The research is novel, as it is based around an established and accredited PhD module that has already been adapted in various ways in terms of content and timing of delivery. Drawing in part on Kuhlthau's (1991) 'Information Search Process', the aim is to provide a deeper understanding of a specific group of humanities students during the initial months of their PhD research.

## 2. Background

UCC Library has been providing an accredited and assessed information literacy course/module (five ECTS) as part of the University's structured PhD programmes since 2008. The course was originally devised through partnership between the libraries of University College Cork, NUI Galway, and Trinity College Dublin. Since then, UCC Library has continued to develop the course, delivering it up to four times per year. In its original format, the module consists of six compulsory units, at the end of which participants are required to submit a reflective essay. Delivery is through face-to-face workshops, supplemented by tailor-made online material. The module benefits from valuable support from the Dean of Graduate Studies and forms part of the structured PhD programmes within the University. It is available to all postgraduate researchers in UCC.

Each unit within the module is delivered by different Library staff members, and there is valuable input from academic staff. The presenters have always placed great value on feedback from participants, both through end-of-unit feedback forms and through focus groups. In response to feedback the module is now run as a concentrated block (over four days), but also as a series of workshops. Using this flexible approach, researchers are more likely to be able to attend units at times that suit their needs.

At the outset, the module content was compiled primarily with a Science, Engineering and Health Sciences audience in mind. In 2011, the content was re-imagined for the purposes of delivering it to PhD students and researchers within the College of Arts, Celtic Studies and Social Sciences. Each unit was re-worked to some degree to cater for this audience, and a new unit on using Irish archives for research was introduced, as well as new content on effective use of the web for research. The course now comprises fifteen hours class-contact time in addition to substantial online support material. Assessment is by means of a reflective essay: students are required to review and consider each element of the module in the context of their own research.

Content for the 7 units of the PG6009 'Graduate Information Literacy Skills' module (humanities and social sciences version) is as follows:

- Unit 1: Research Resource Discovery (including effective database searching)
- Unit 2: Using the Web Effectively and Evaluating Research Results (including a section on bibliometrics)
- Unit 3: Tracking Down Results and Keeping Up-to-Date
- Unit 4: Managing your Information (using 'Endnote' in particular)
- Unit 5: Ethics in Using Information

- Unit 6: Publishing and Disseminating your Research (including open access publishing)
- Unit 7: Using Archives for Research in Ireland (this unit is optional)

## 2. Literature review

Few studies have looked at generic information literacy courses for PhD students: Secker and Macrae-Gibson (2010) provide a good overview of a six-week course and Heading et al. (2010) report on two three-hour sessions aimed at doctoral students, specifically focussing on finding and managing information. Other generic courses that have been described in the literature (but not aimed at PhD students) include Mayer and Bowles-Terry (2013), Daugman et al. (2011), O'Clair (2013) and Toth (2005).

A lack of research into the information practices of PhD students has been noted, for example Fleming-May and Yuro (2009), Patterson (2009), and the Research Information Network (2008). In the U.K., Streatfield et al. (2010) point to a renewed interest in this area. A lack of research into the information seeking needs/behaviours of humanities graduate students in particular was noted by Barrett (2005). A thorough literature review of the information behaviour of humanities scholars has been provided by Case (2012). Catalano's (2013) systematic review of the information behaviour of graduate students includes the humanities.

An image of the humanities scholar working alone, adopting a variety of approaches to finding material, was portrayed by Stone (1982); however, the importance of a professional network when sourcing information was suggested by Watson-Boone (1994). In the UK, the Research Information Network (2011) described a 'richness and variety' within information practices in the humanities, with increased levels of collaboration, and increased use of technology. The report highlights the tendency of humanities researchers to use a wide range of resources, moving 'seamlessly between them' (p.7).

The importance of serendipity in humanities research has been highlighted by (among others) Allen & Nigel (2003), and also with particular regard to research in history by Duff and Johnson (2002) and, more recently, by Quan-Haase and Martin (2012). Other studies have referred to the wide variety of source material and the often complex nature of humanities research, for example Toms and O'Brien (2008), Puckett (2010), Rimmer et al. (2008), Barrett (2005). An examination of subject-specific studies reveals the diversity of information practices across the humanities, for example music research was examined by Dougan (2012) and Brown (2002), information practices in art history by Larkin (2010) and Beaudoin (2005), and the research of historians by Tibbo (2003) and Rhee (2012).

Although Catalano's (2013) review study could not find agreement on consistent information behaviours among humanities researchers, Barrett (2005) has suggested that humanities graduate students do share common approaches to research and 'tend to initiate research projects in haphazard, serendipitous ways' (p. 330). Research supervisors play a key role in supporting humanities graduate researchers. Librarians should be aware of differing needs at different stages of the research. In the context of digital resources in the humanities, Warwick et al. (2008) support the view that humanities researchers need a wide range of resources and claim that this is still true in a digital environment. Personal knowledge and face-to-face meetings with information specialists are still valued.

Looking beyond the humanities, George et al.(2006) found, in their multidisciplinary study, that graduate students displayed 'random motions of information seeking' when choosing an area of focus and a search strategy. People play a central role when graduate students are searching for information. Rempel's (2010) study, focussing mainly on Masters students, also revealed a 'lack of a single path through the literature review research process'; students had difficulty scoping their project. This supports Bruce (2001) who highlighted the challenges faced by 'neophyte' graduate students attempting to deal with the scope of their literature review during the early stages.

Problems with information literacy skills among postgraduates have been identified in recent studies by Conway (2011), Blignaut and Els (2010) and Chu and Law (2007). In an Irish study, Patterson (2009) identified wide variation in information literacy 'within and across disciplines'. The Research Information Network (2011) highlighted a need for training humanities researchers in how to use new tools to facilitate their research.

In the U.K., Streatfield et al. (2010) reported on the findings of a 'Research Information Network' report from 2008. They suggest that, in terms of support for researchers, libraries face difficult choices: whether to opt for training-based approaches or other means such as embedding librarians in research teams, and whether to concentrate on department/faculty-based training or direct support to researchers. A JISC/British Library (2012) report surveyed over 17,000 doctoral students across all subject disciplines in the U.K. and found that training for research work and for information use is an area of dissatisfaction among 'Generation Y' doctoral students. Their preference was for face-to-face support while generic training is often considered unsuitable. The authors of the report question whether doctoral students are being properly equipped to navigate their way through the variety of research materials that are now available.

Fleming-May and Yuro (2009) found that social sciences doctoral researchers were sceptical of 'drop-in' library instruction sessions and general library workshops. The relationship with a faculty mentor was important and the library must become known in order to have an impact. Research is needed into the 'zones of intervention' particular to PhD study. Barrett (2005, p. 330) too suggests that it would be a 'profitable approach' for libraries to think in terms of Carol Kuhlthau's (1994) 'zones of intervention' by recognising 'patterns in humanities graduate student research behaviour'. Likewise Rempel (2010) refers to 'zones of intervention' targeted and tailored to meet the particular needs of researchers.

Harris (2011) makes a case for partnering doctoral students with librarians in order to improve research skills and dissertation completion rates and to lower attrition. Gessner et al. (2011) looked at doctoral students in the humanities at Cornell University and Columbia University in order to investigate if the library can influence student success. They found that PhD students need 'communities of support'. They have specific needs in terms of information/citation management, and have general concerns about project and time management.

Haglund and Olsson (2008) have emphasised the importance of personalized solutions that provide young researchers with 'what they actually want rather than what we think they want' (p. 58). Macauley and Green (2007) cautioned librarians against viewing doctoral students as being 'information literacy deficient' (p. 73) and assuming that all require information literacy interventions. Their emphasis is on dialogue and one-to-one interactions as a way of connecting with postgraduate learners. Bawden and Robinson (2009) point to the complexity of information behaviour, and that a deeper understanding is essential in order to move beyond a 'library-centric' view of information literacy (p.187).

While a number of studies have discussed Ellis's (1989) Information Behaviour model in the context of humanities research (for example Bronstein, 2007; Buchanan *et al*, 2005; Ge, 2010), Kuhlthau's (1991) 'Information Search Process' has particular relevance to this study. The process involves an individual seeking meaning in the course of seeking information. They experience uncertainty and vagueness at the outset ('initiation' stage), followed by feelings of optimism during the 'selection' stage. The third (and often key) stage, 'exploration', can be marked by confusion and doubt as the individual attempts to become orientated and sufficiently informed to focus their topic. The fourth stage, 'formulation', involves a sharper, clearer focus, and increased confidence. The fifth stage is 'collection', followed by stage six 'presentation'. The final stage is 'assessment' of what has been achieved. Uncertainty is a key concept, and 'zones of intervention' (Kuhlthau, 1994) are areas in which an information user requires assistance to enable them to progress. Interventions outside this zone are unnecessary, and potentially overwhelming.

### **3. Research question**

On the evidence of the literature review, the information seeking requirements of humanities researchers can be diverse, with particular challenges at the outset. Other people tend to play an important role in supporting researchers, particularly the research supervisor. The library can play a part once it makes itself known. A number of studies have underlined the value of potential ‘zones of intervention’, encouraging librarians to recognize patterns in graduate student research behaviour at particular stages in order to target support more effectively. There appears to be a lack of consensus on whether interventions should be on a one-to-one basis, with services tailored to individual needs, or if generic courses have a worthwhile role, especially in regard to support for humanities research. Thus the research question emerges: is a generic information literacy module an appropriate method of intervention in the initial months of a humanities PhD? What can we learn from the course participants that will give us a better understanding of their information behaviour so that the university library can improve its approach to supporting them?

### **4. Methodology:**

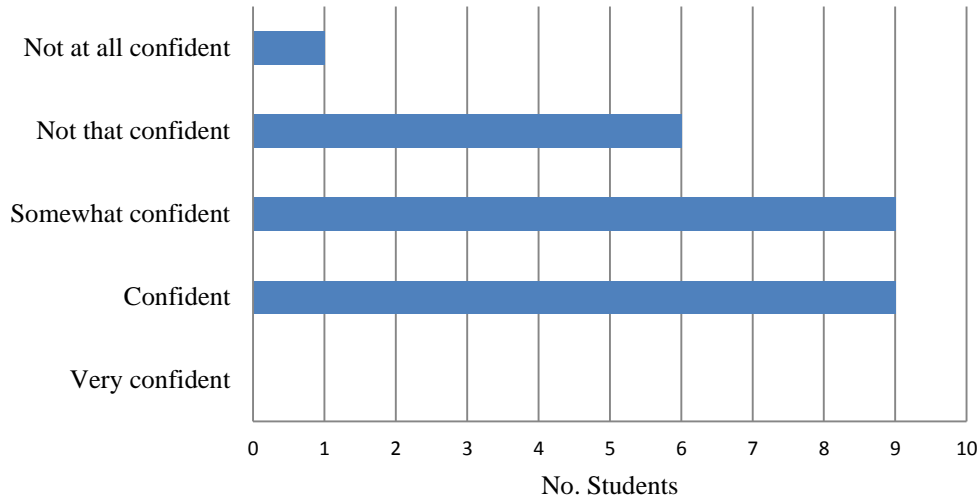
A questionnaire was distributed to new humanities PhD students in UCC at the beginning of October 2012, prior to their attending the PG6009 ‘Graduate Information Literacy Skills’ module. This set out to examine general perceptions regarding their PhD, their research topic, and how they intended to meet their information needs. In late February 2013, a second questionnaire was distributed to those who had completed the module (either by attending the November four-day/block delivery, or the workshops in January and February). This questionnaire was also distributed to second-year PhD students who had completed the module during their first year. The questionnaires were created using survey software, were distributed by email, and were anonymous and voluntary.

Interviews were conducted, in April 2013, with six of the participants in order to gain a richer understanding of how their information seeking needs had evolved over the first few months of their PhD. All of the students who had completed the module were invited to participate. The interview technique was influenced by Dervin’s (1992) ‘sense-making methodology’, which uses the idea of ‘gap’ as central to its methodological foundation. The students were asked to describe the greatest challenges and obstacles they encountered during the initial months, how they bridged those gaps, and what helped (or did not help) them to ‘make sense’ of their situation (see Appendix 1). This technique was chosen with the intention of developing a clearer understanding of the library’s role (and potential role) in supporting PhD students. The transcripts were coded and examined alongside the data yielded by the questionnaires.

### **5. Results:**

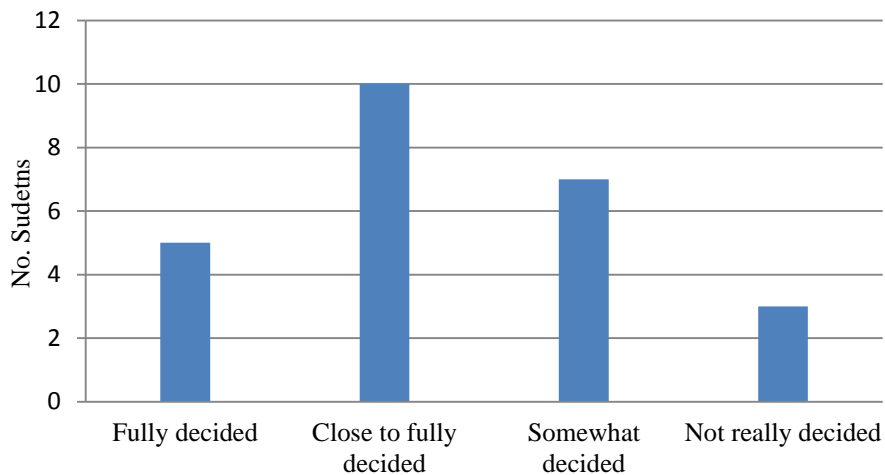
#### *5.1 Survey 1*

Twenty five new humanities PhD students responded to the first questionnaire. None of these respondents indicated that they felt ‘very confident’ about the literature search but nine (36%) indicated that they felt ‘confident’ (Figure 1). Another nine (36%) were ‘somewhat confident’, while six (24%) were ‘not that confident’ and one was ‘not at all confident’.



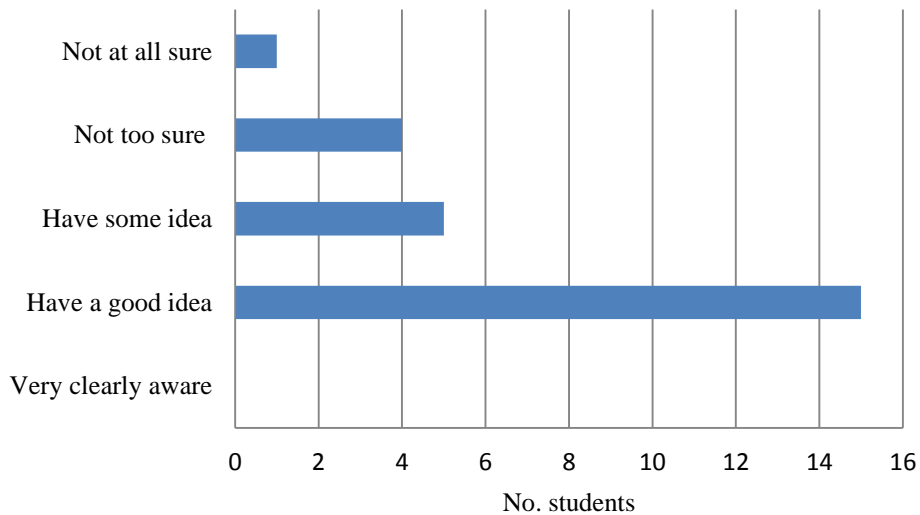
**Figure 1.** How confident do you feel about literature searching at this stage of your programme?

Fifteen (60%) claimed to be either ‘fully decided’ or ‘close to fully decided’ on their research topic. Seven (28%) were ‘somewhat decided’. Three (12%) were ‘not really decided’ (Figure 2).



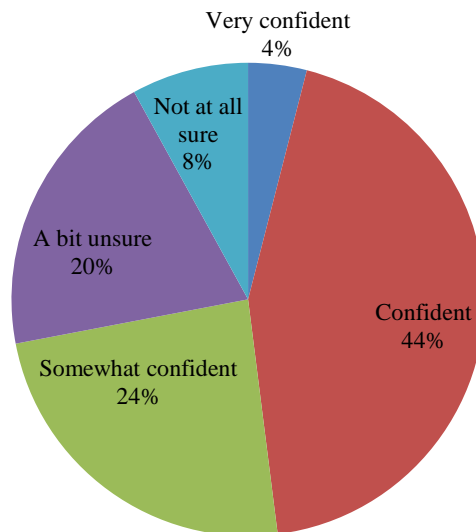
**Figure 2.** To what extent do you feel you have decided on your research topic/question?

No one indicated that they were ‘very aware’ of the information sources they were likely to use, but fifteen (60%) claimed they had ‘a good idea’ of the sources. Five (20%) indicated they had ‘some idea’ of the sources, while another five were either ‘not too sure’, or ‘not at all sure’ (Figure 3).



**Figure 3.** To what extent are you aware of the information sources that you are likely to require for your literature review?

While one student claimed to be ‘very confident’ in using the sources, eleven (44%) indicated they were ‘confident’; six (24%) were ‘somewhat confident’, and seven (28%) were either ‘a bit unsure’, or ‘not at all sure’ of using the sources (Figure 4)



**Figure 4:** How confident do you feel in using these information sources

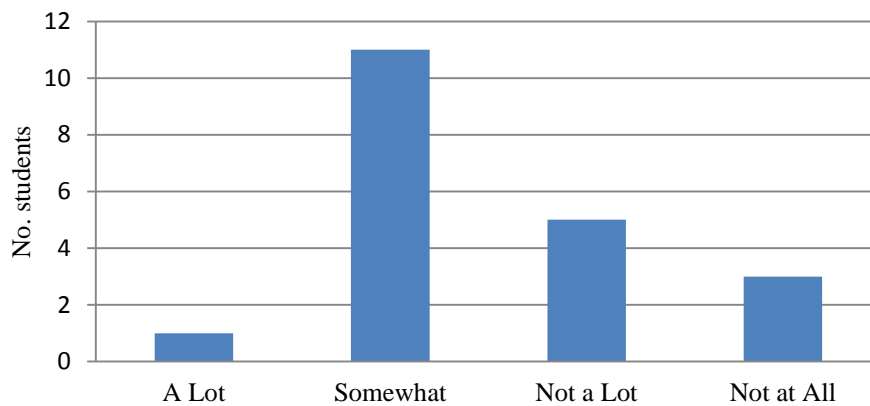
Respondents were asked to suggest the people and groups/departments/organisations they thought might offer them some support during the literature search process. Eighteen of the twenty five respondents answered this question. Supervisors were mentioned by seven in total, four mentioning them first. Library or library staff were mentioned in nine of the responses but, because the questionnaire was provided by a librarian, this figure may be unreliable. Other lecturers and academics were mentioned by seven respondents, while fellow students were mentioned just twice. Also included were ‘people who teach generic modules’, ‘IT support’, local historians and societies, as well as some national organisations.

Respondents appeared to be reasonably confident in their ability to critically evaluate information sources: three (12%) claimed they could do so ‘very well’, thirteen (52%) claimed to be able to do so ‘well’, five (20%) ‘neither well nor badly’, four (16%) ‘not well’. Regarding their ability to manage information, four (16%) said they could do so ‘very well’, five (20%) ‘well’, twelve (48%) ‘not well nor badly’, four (16%) ‘not well’. The respondents appeared less sure about their ability to keep up-to-date with the latest research in their area: seventeen (68%) indicated that they had not yet developed an effective approach to doing so.

## 5.2 Survey 2

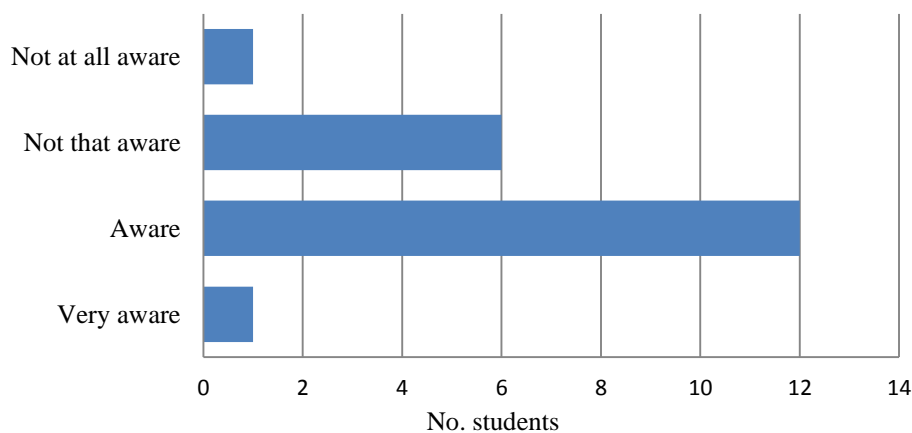
The second questionnaire was sent to humanities students who had completed the PG6009 module in full. In total twenty students completed the questionnaire. This survey was sent only to students who had attended the entire module.

One respondent said that his/her research topic had changed ‘a lot’, eleven said it had changed ‘somewhat’ (55%), five (25%) said ‘not a lot’, three (15%) said ‘not at all’ (Figure 5).



**Figure 5:** To what extent has your research topic changed since the beginning of your PhD?

When asked how aware they had been (at the beginning of the PhD) of the information sources they are now using, one said he/she had been ‘very aware’, twelve (60%) were ‘aware’, six (30%) were ‘not that aware’, and one said they were ‘not at all aware’ (Figure 6).



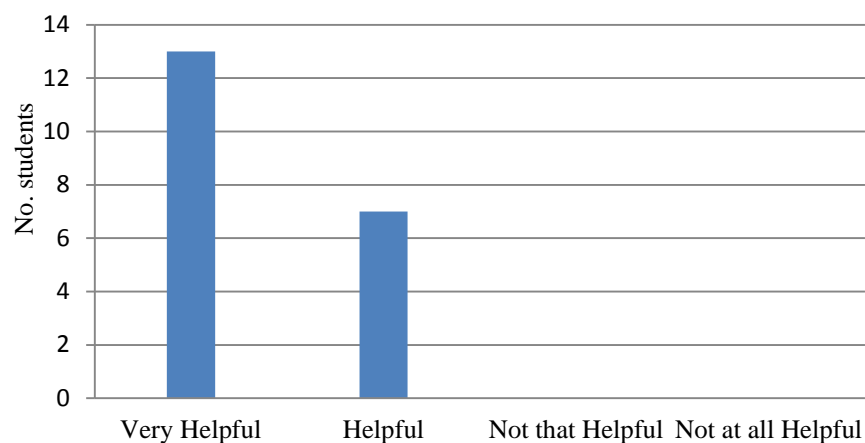
**Figure 6:** In hindsight, to what extent were you aware of the information sources that you are now using?



Students were asked what major obstacles (with regard to the literature search) they had faced during the initial months. Eight made some reference to difficulties with scoping, focussing and narrowing their topic. Six respondents mentioned issues with regard to searching and finding good information, two mentioned managing information, while two referred to issues relating to time management. Other obstacles were: keeping up-to-date with research, technology, knowing more about archives, language skills, understanding philosophical frameworks, and knowing what other skills would be needed.

When asked what helped them during that period, seven mentioned PG6009, six referred to their supervisor, and six referred to other courses they had attended. Four mentioned self-reliance, four mentioned other students, and three mentioned library staff. One respondent mentioned the web and another mentioned funding information.

When asked how helpful they had found PG6009, thirteen (65%) said ‘very helpful’ and seven (35%) found it ‘helpful’ (Figure 7). No one indicated that it was ‘not that helpful’ or ‘not at all helpful’.



**Figure 7:** How helpful was the PG6009 module?

The respondents were asked to rank the various aspects of the module in order of usefulness (for the early stages of their research), and the outcome was: 1. Research resource discovery, 2. Evaluating information, 3. Using the web effectively, 4. Bibliometrics, 5. Keeping-up-to-date, 6. Managing information, 7. Getting published, 8. Open access, 9. Research ethics. (The archives unit was not included as it was optional).

When asked to comment on the timing of the module, all twenty respondents indicated that first year is an appropriate time to attend the course. Six mentioned that a flexible approach, with the option of both a block delivery and workshops, was suitable, while five mentioned that extra follow-up sessions on new topics would also be useful.

In regard to method of delivery, eight (40%) indicated that they preferred face-to-face only and twelve (60%) preferred face-to-face plus course content online. No one would have preferred an online-only delivery.

When asked if there is more that the library can do for PhD students, six (of nineteen respondents to this question) indicated that they are happy with what the library currently provides and could not suggest anything further. Seven suggested further sessions later on would be helpful, while one mentioned splitting some of the units into two parts. Examples for new topics suggested were: new databases, preservation, Zotero, primary sources from other countries, writing and journalism. Three said that one-to-one assistance from specific librarians would be useful. Other items mentioned included access to more databases and more availability of books in the library.

### 5.3 Interviews

In many ways, the interviews confirmed the findings of the questionnaires, but also offered some fresh perspectives. In terms of the major gaps/challenges that the participants faced during the first few months, a number of related themes were evident. One such theme was that, at the outset, participants were not aware of everything that they need to know. This is something they had to, in many cases (and unlike Masters students), figure out themselves in the unique context of their own project. Many decisions have to be made regarding which structured modules, courses and workshops to attend. The PhD students must attempt to sequence their work and their attendance in an optimal way. It appears that there was a degree of serendipity even in courses/workshops they chose, and what they learned at these. One student suggested that this

*'may be all part of the literature review process'*

Some of the participants admitted to rushing in to some aspects of their research:

*'I did a lot of work before I even started, but in another way it didn't help because I wasn't that ready, and I shouldn't have been trying to do that really, and I did all of that without much help from technology'*

Another said:

*'I think I had got stuck into it, but I didn't realise that I needed to do a load of preparation before I could get stuck into it. I didn't really know what I was doing; I kind of rushed into it'*

A second (related) theme was that the interviewees each portrayed themselves as being, in some respects, different to other PhDs students at the beginning. They were coming to their PhD from a wide variety of backgrounds, and each seemed to have experienced a degree of insecurity or anxiety when constructing an understanding of what being a PhD student means. It appears that this gap is often bridged, in part, through informal channels, and through meeting other students at courses and conferences, etc. For example, one student spoke of the challenge of having to

*'work out how you are supposed to be a PhD student ... you find information from people who are further down the road'*

Another interviewee stated:

*'I thought PhDs had two heads and I was amazed when I started going to conferences and stuff and meeting people who are doing PhDs, and they were fairly normal - so then I realised that it was within my grasp'*

In this way attending courses like PG6009, or other events, offers PhD students an opportunity to interact. As one interviewee put it:

*'When I attended the modules I met very nice people ... one of them was very much towards presenting at conferences and so on and she kind of inspired me really'*

Another said that what helped in the beginning were:

*'Mostly other new PhD students, not just in UCC but in other places as well, going to the same sort of conferences'*

Technology was a recurring theme, and this was tied-in with the challenge of finding out what they need to know, and trying to sequence their research and attendance at appropriate courses and workshops. For example, one interviewee stated that:

*'For me the biggest thing were the technologies that I'm going to be using for part of the PhD, and understanding what was out there, and understanding what was going to be relevant to the PhD itself'*

Another interviewee said:

*'I'd prefer to have more technical training up-front because the research can come later, if you know what you want to do you need to have the technical grounding first of all'*

In regard to the PG6009 module, it was again clear that the first term was a suitable time, but the option of attending workshops later is also important:

*'It was a really good time to run it in the first term, because even if like me you're not using all the tools right from the start, you know they exist and at what point you need to bring them in'*

Another interviewee suggested:

*'The timing is always different for different people isn't it? Even now if you offered me the whole module again I'd probably go'*

Another said:

*'I started in January and the workshops ran almost immediately so it was most beneficial, so I really didn't face any obstacle - but had the module been at a later stage I would have been struggling'*

A further common thread concerned the module content. The interviewees were very positive about this and it was clear that, even if they may have known some of the content, they appreciated hearing things again, and from a different angle, for example one participant said:

*'To be honest there were some bits I already knew but I think if you're doing a course like that you've got to cater to everyone and I didn't get bored, I found it interesting ... there are other angles and different ways of searching that maybe I didn't know about'*

## **6. Discussion**

Each PhD researcher is on their own path of discovery, becoming experts in their chosen research area. Each has their own information needs and sources, and there may be many potential 'zones of intervention'.

### *6.1 Initial stages*

Among the participants of this study, there were varying levels of confidence at the beginning of the research process, and substantial variation in the extent to which they had decided on their research topics. This extended to how aware they perceived themselves to be of the information sources they were likely to need. The interviews revealed that, at the formal start-date, some students were at a slightly later point in the research process, having prepared some of the work before formally commencing their programme. It is interesting that the second questionnaire revealed that most of the participants found that their topic changed to some degree during the initial months (only 15% indicated that it did not change at all). It is important that libraries don't make assumptions about PhD students' level of preparedness, and to be aware that they are working through a process during the initial months. It is significant that 35% of the students (who took the second questionnaire) said they had not been aware of the information sources they were to use later.

With reference to Kuhlthau's 'Information Search Process', it appears that the students who completed the first questionnaire in early October (shortly after their formal start-date) may have been at the initiation or selection stage of their research, which may explain the variety of confidence levels. Indeed the interviews revealed that some students had attempted to start their research before formally commencing their programme, so may have already been at the exploration stage. However, it is likely that the exploration stage, for many of the participants, coincided with the delivery of the module in November and January. In this way the timing of PG6009 should help participants become better equipped for this potentially challenging stage of the research, building confidence in their ability to conduct a literature search, to hone their research topic, and develop confidence in their ability to become 'PhD researchers'. The interviews were held in April at a time when the participants appeared to be closer to the formulation and collection stages, displaying greater confidence in their research project.

### *6.2 The literature search*

Clearly, the tasks of scoping and focussing the research topic pose the foremost challenge during the initial months, and this corroborates the findings of the literature review, for example Bruce (2001).

Allied to this are challenges relating to searching and finding good information. The ‘haphazard’ nature of the early stages of humanities research, identified in the literature review, for example Barrett (2005), George et al. (2006), appears to be borne out by the study. What was interesting is that this ‘lack of a single path’ (Rempel, 2010) appears to extend beyond the literature search to include choice of courses, workshops, training, and the use of technology. The interviews demonstrated that some students rush in to the research at the beginning without being fully aware of relevant sources and technologies (perhaps moving directly from selection to the collection stage). Trying to plan and sequence their research is a challenge, especially now that there are numerous modules and training courses available to PhD students. The value of serendipity in much of humanities research appears now also to extend to what may be learned during structured modules and other courses. With regard to technology and digital resources, the interviews suggested that students aren’t always aware of what they need to know at the outset, and it takes some time for them to piece this together. This correlated with the report of the Research Information Network (2011). Getting to grips with technology coincided with the other challenges: scoping the research, planning and sequencing the overall project. In turn these challenges come at a time and are part of the process of making sense of what it means to be a PhD researcher. There was a sense, from the interviews, that each participant was aware of the uniqueness of their own research, and what brought them as individuals to the PhD, and where they now ‘fit in’ as PhD students.

### *6.3 Research supports/interventions*

A lot depends on interventions from others; supervisors are key for some, but a variety of people play a part. The role of other students and researchers is important, as was their own self-reliance; indeed it appears that the participants had not expected that the role of other students would be so influential, and the interviews revealed how important this had been for most. PG6009 played an important role for the participants of this study, as did other courses that they attended. All of the participants found the module to be either good or very good. It is clear, therefore, that despite the relatively generic nature of the PG6009 module, and the wide range of humanities disciplines, this information literacy module had clear benefits for the students. Even if some aspects were not new to some participants, this was something they had expected of a generic module, and participants were happy to hear things covered from a new angle. The interviews showed that the participants were positive about each unit within the module. It is perhaps significant that the topics that were deemed most useful were those that helped them overcome their greatest challenges during the first year, i.e. searching, scoping and evaluating (resource discovery, using the web effectively, and evaluation of information).

### *6.4 Course timing & content*

The results (of the second questionnaire and the interviews) show that the initial months of the PhD are a good time to deliver the module, but flexibility is also valued, allowing students the option of attending some aspects at a later stage. The ‘haphazard’ nature of the initial research stages may mean that some will wish to revisit particular units later. If the research process is an iterative one, aspects of the module may be appropriate for some researchers at a later point, however the participants clearly valued the awareness of resources early on. Once they are aware of the information, they can then attempt to understand how this fits within the evolving needs of their own research, helping them to make sense of their situation. Offering an information literacy module as a concentrated block and then repeating it later in the year as a series of workshops is a suitable method of delivery, as it helps the students to integrate the module more easily into a potentially busy schedule. It is important to let PhD students know that they are welcome to attend workshops again as refreshers. It is essential to continually seek feedback in order to improve the module and to avoid what Bawden and Robinson (2009) refer to as a ‘library-centric’ approach. In addition, the course-providers should also be prepared to try new topics based on the feedback. It appears, from this study, that there is some demand for extra content. The workshop series format can accommodate this, as new workshops can be conveniently advertised together with the existing ones.

### *6.5 Face-to-face delivery and module assessment*

The face-to-face nature of the delivery is clearly preferred, but the online content allows students to return to the topic at a time that suits. Because support from other PhD students is important, courses like PG6009 offer the opportunity to meet others and form what Gessner et al. (2011) refer to as ‘communities of support’. For the librarians who teach the module, having direct contact with the PhD students, even in a classroom situation, provides invaluable feedback. The PG6009 module assessment is by means of a reflective essay, where the students must apply each unit of the module to their own research topic. All of the staff who teach the module are involved at the assignment stage, and reading the essays enhances their understanding of the research process and offers a deeper understanding of PhD students’ information needs. For example, the assignments provide an insight into the aspects of the course that are new or unfamiliar to participants, and which are deemed to be of most benefit to them. The assignments also reveal the types of topics that the PhD students are researching, and how they approach the literature search in the early stages.

### *6.6 Further suggestions for the Library*

Suggestions for improving research support included one-to-one meetings with librarians; however, the majority of students did not indicate this as a priority. The literature review questioned if methods such as promoting one-to-one personalised support to researchers may be the optimal approach; demand for this didn’t come through strongly enough in this study, and it might be argued that attending the module/workshops, and becoming aware of different librarians (with different expertise, for example Subject Librarians, Archivists, Institutional Repository Manager etc.) might be sufficient during the initial stages of research (while the students are scoping and amending research topics). Researchers can then be encouraged to make contact (for advice and counsel) with specific librarians at a later stage when the need arises. Referring to Kuhlthau (1994), it might be that one-to-one sessions, particularly at the wrong stage, may prove inefficient (and even unhelpful) in some cases. By making itself known, a library can enhance its role in supporting research, helping to reduce anxiety and potentially decrease attrition rates. Barrett (2005) emphasises the importance of librarians increasing their profile and relevance as a way of investing themselves in the research habits of future humanities faculty members. For this to succeed, it is vital that the course content is continually reviewed, and updated, based on feedback. Offering extra research workshops beyond the module units may also prove beneficial.

## **7. Conclusions**

Despite the relatively generic nature of the PG6009 Graduate Information Literacy Skills module, and the diversity of humanities research (as evidenced through the literature review), the course had clear benefits for the participants. The study confirmed that the first year is a time when PhD researchers in the humanities are scoping and amending topics, and librarians should not make assumptions about students’ level of preparedness for these early stages of research. Learning how to narrow their topic, find and manage quality information poses a challenge, as are issues relating to technology. Planning and sequencing their research and attendance at seminars, training and courses, can also be difficult at a time when they are making sense of what it means to be a PhD researcher.

A variety of people help them to bridge these initial gaps, and there appears to be space for libraries to play a fruitful role. The participants reported that the most appropriate time to attend the course/module is during the initial months of the PhD. Some preferred to attend particular units later as stand-alone workshops, or to have the option of repeating particular topics, and this should be encouraged. The most valued elements of the module (for the early stages of the PhD) included resource discovery, effective use of the web, and critical appraisal. Face-to-face delivery is preferred, and there is potential demand for additional sessions on new topics.

It is critical that the library continues to gauge reaction to content, and amend the course as appropriate to ensure its relevance. There is scope for encouraging further one-to-one contact with

librarians, but it may not be something that all PhD students require as a priority in the initial stages. A direct benefit of the module is that researchers develop an understanding of the potential of the library, and its key contacts for research support. Likewise, librarians teaching the course gain a greater insight into the work of PhD students, their information practices as researchers, and how they cope in the first year.

## Bibliography

- Allen, F. and Nigel, F. (2003), "Serendipity and information seeking: an empirical study", *Journal of Documentation*, Vol. 59 No.3, pp. 321-340.
- Barrett, A. (2005), "The information-seeking habits of graduate student researchers in the humanities", *The Journal of Academic Librarianship*, Vol. 31 No. 4, pp. 324-331.
- Bawden, D. and Robinson, L. (2009), "The dark side of information: overload, anxiety and other paradoxes and pathologies", *Journal of Information Science*, Vol. 35 No. 2, pp. 180-191.
- Beaudoin, J. (2005), "Image and text: a review of the literature concerning the information needs and research behaviors of art historians", *Art Documentation*, Vol. 24 No. 2, pp. 34-37.
- Blignaut, A. S. and Els, C. J. (2010), "Comperacy assessment of postgraduate students' readiness for higher education", *The Internet and Higher Education*, Vol. 13 No. 3, pp. 101-107.
- Bronstein, J. (2007), "The role of the research phase in information seeking behaviour of Jewish studies scholars: a modification of Ellis's behavioural characteristics", *Information Research*, Vol. 12 No 3, paper 318.
- Brown, C. D. (2002), "Straddling the humanities and social sciences: the research process of music scholars", *Library & Information Science Research*, Vol. 24 No.1, pp. 73-94.
- Bruce, C. (2001), "Interpreting the scope of their literature reviews: significant differences in research students' concerns", *New Library World*, Vol. 102 No.4/5, pp. 158-166.
- Buchanan, G., Cunningham, S. J., Blandford, A., Rimmer, J., and Warwick, C. (2005), "Information seeking by humanities scholars" in *Research and Advanced Technology for Digital Libraries*, Springer, Berlin, Heidelberg, pp. 218-229.
- Case, D. A. (2012), *Looking for Information*, Emerald, Bingley, UK.
- Catalano, A. J. (2013), "Patterns of graduate students' information seeking behavior: a meta-synthesis of the literature", *Journal of Documentation*, Vol. 69 No. 2, pp. 243-274.
- Chu, S. K. and Law, N. (2007), "Development of information search expertise: postgraduates' knowledge of searching skills", *Libraries & the Academy*, Vol. 7 No. 3, pp. 295-316.
- Conway, K. (2011), "How prepared are students for postgraduate study? A comparison of the information literacy skills of commencing undergraduate and postgraduate information studies students at Curtin University", *Australian Academic & Research Libraries*, Vol. 42 No. 2, pp. 121-135.
- Daugman, E., McCall, L. and McMahan, K. (2011), "Designing and implementing an information literacy course in the humanities", *Communications in Information Literacy*, Vol. 5 No. 2, pp. 127-143.
- Dervin, B. (1992), "From the mind's eye of the user: the sense-making qualitative-quantitative methodology", in Glazier, J.D. and Powell, R.R. (Eds.), *Qualitative Research in Information Management*, Libraries Unlimited, Englewood, CO, pp. 61-84.
- Dougan, K. (2012), "Information seeking behaviors of music students", *Reference Services Review*, Vol. 40 No. 4, pp. 558-573.
- Duff, W. M. and Johnson, C. A. (2002), "Accidentally found on purpose: information-seeking behavior of historians in archives", *The Library Quarterly*, Vol. 72 No. 4, pp. 472-496.
- Fleming-May, R. and Yuro, L. (2009), "From student to scholar: the academic library and social sciences PhD students' transformation", *Libraries & the Academy*, Vol. 9 No. 2, pp. 199-221.
- Ge, X. (2010), "Information-seeking behavior in the digital age: a multidisciplinary study of academic researchers", *College & Research Libraries*, Vol. 71 No. 5, pp. 435-455.
- George, C. A., Bright, A., Hurlbert, T., Linke, E. C., St Clair, G. and Stein, J. (2006), "Scholarly use of information: graduate students' information seeking behaviour", *Information Research*, Vol. 11 No. 4, Paper 272.

- Gessner, G.C., Jaggars, D.E., Rutner, J. and Tanchevaet, K. (2011), *Supporting humanities doctoral student success: a collaborative project between Cornell University Library and Columbia University Libraries*, Council on Library and Information Resources, Washington, DC.
- Grant, M. and Berg, M. (2003), "Information literacy integration in a doctoral program", *Behavioral & Social Sciences Librarian*, Vol. 22 No. 1, pp. 115-128.
- Haglund, L. and Olsson, P. (2008), "The impact on university libraries of changes in information behavior among academic researchers: a multiple case study", *The Journal of Academic Librarianship*, Vol. 34 No. 1, pp. 52-59.
- Harrington, M. R. (2009), "Information literacy and research-intensive graduate students: enhancing the role of research librarians", *Behavioral & Social Sciences Librarian*, Vol. 28 No. 4, pp. 179-201.
- Harris, C. S. (2011), "The case for partnering doctoral students with librarians: a synthesis of the literatures", *Library Review*, Vol. 60 No. 7, pp. 599-620.
- Heading, D., Siminson, N., Purcell, C. and Pears, R. (2010), "Finding and managing information: generic information literacy and management skills for postgraduate researchers", *International Journal for Researcher Development*, Vol. 1 No. 3, pp. 206-220.
- JISC, British Library (2012), "The research behaviour of generation Y doctoral students", available at: <http://www.jisc.ac.uk/publications/reports/2012/researchers-of-tomorrow.aspx> (accessed 16 April 2013).
- Kuhlthau, C. C. (1991), "Inside the search process: information seeking from the user's perspective", *JASIS*, Vol. 42 No. 5, pp. 361-371.
- Kuhlthau, C. C. (1994), "Students and the information search process: zones of intervention for librarians", *Advances in Librarianship*, Vol. 18, pp. 57-72.
- Larkin, C. (2010), "Looking to the future while learning from the past: information seeking in the visual arts", *Art Documentation*, Vol. 29 No. 1, pp. 49-60.
- Macauley, P. and Green, R. (2009), "Can our relationships be reconceptualized? librarians, information literacy, and doctoral learners", *Journal of Education for Library and Information Science*, Vol. 50 No. 2, pp. 68-78.
- Mayer, J. and Bowles-Terry, M. (2013), "Engagement and assessment in a credit-bearing information literacy course", *Reference Services Review*, Vol. 41 No. 1, pp. 62-79.
- O'Clair, K. (2013), "Preparing graduate students for graduate-level study and research", *Reference Services Review*, Vol. 41 No. 2, pp. 14-14.
- Patterson, A. (2009), "A needs analysis for information literacy provision for research: a case study in University College Dublin", *Journal of Information Literacy*, Vol. 3 No 1, pp. 5-18.
- Puckett, C. (2010), "Oh, the humanities: understanding information behavior to foster information literacy", *Emporia State Research Studies*, Vol. 46 No. 2, pp. 33-43.
- Quan-Haase, A. and Martin, K. (2012), "Digital humanities: the continuing role of serendipity in historical research", in *Proceedings of the 2012 iConference in Toronto, Ontario, 2012*, ACM, pp. 456-458.
- Rempel, H. G. (2010), "A longitudinal assessment of graduate student research behavior and the impact of attending a library literature review workshop", *College & Research Libraries*, Vol. 71 No. 6, pp. 532-547.
- Research Information Network (2008), "Mind the skills gap: information-handling training for researchers", available at <http://www.rin.ac.uk/our-work/researcher-development-and-skills/mind-skills-gap-information-handling-training-researchers> (accessed 16 April 2013).
- Research Information Network (2011), "Reinventing research? information practices in the humanities", available at <http://www.rin.ac.uk/our-work/using-and-accessing-information-resources/information-use-case-studies-humanities> (accessed 16 April 2013).
- Rhee, H. L. (2012), "Modelling historians' information-seeking behaviour with an interdisciplinary and comparative approach", *Information Research*, Vol. 14 No.4, paper 554.
- Rimmer, J., Warwick, C., Blandford, A., Gow, J. and Buchanan, G. (2008), "An examination of the physical and the digital qualities of humanities research", *Information Processing & Management*, Vol. 44 No. 3, pp. 1374-1392.
- Secker, J. and Macrae-Gibson, R. (2011), "Evaluating MI512: an information literacy course for PhD students", *Library Review*, Vol. 60 No. 2, pp. 96-107.

- Stone, S. (1982), "Humanities scholars: information needs and uses", *Journal of Documentation*, Vol. 38 No. 4, pp. 292 -313.
- Streatfield, D., Allen, D. and Wilson, T. (2010), "Information literacy training for postgraduate and postdoctoral researchers: a national survey and its implications", *Libri: International Journal of Libraries & Information Services*, Vol. 60 No. 3, pp. 230-240.
- Tibbo, H. R. (2003), "Primarily history in America: how US historians search for primary materials at the dawn of the digital age", *American Archivist*, Vol. 66 No. 1, pp. 9-50.
- Toms, E. G., and O'Brien, H. L. (2008), "Understanding the information and communication technology needs of the e-humanist", *Journal of Documentation*, Vol. 64 No. 1, pp. 102-130.
- Toth, M. (2005), "Research and writing and theses—oh my! The journey of a collaboratively taught graduate research and writing course", *The Reference Librarian*, Vol. 43 Nos. 89-90, pp. 81-92.
- Warwick, C., Terras, M., Huntington, P., and Pappa, N. (2008), "If you build it will they come? The LAIRAH study: quantifying the use of online resources in the arts and humanities through statistical analysis of user log data", *Literary and Linguistic Computing*, Vol. 23 No. 1, pp. 85-102.
- Watson-Boone, R. (1994), "The information needs and habits of humanities scholars", *Rq*, Vol. 34 No. 2, pp. 203-216.

## Appendix 1.

### *Interview Questions.*

Looking back to the first few months of your PhD: thinking of your literature review in particular:

1. What were the greatest challenges/obstacles/confusions that you encountered/experienced during those initial months?

Why was that a particular challenge (based on your prior expectations)?

How did you feel about the research project then?

2. How did you cope with those challenges, get around the problems, do things differently than you previously had envisaged?

3. What helped you to get through?

Why was it a help/how did that help?

What was unhelpful or set you back?

4. If you could wave a magic wand & go back to the beginning of your PhD, what would have been the ideal situation (to help you to bridge that gap)?

What can UCC do to help researchers with those challenges? What can the Library do?

5. What are your thoughts on the PG6009 module (e.g. content, timing, delivery)?